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EXAMINER	
HO, BAO QUAN T	

ART UNIT	PAPER NUMBER
2629	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/526,996	VOELCKERS, OLIVER	
	Examiner	Art Unit	
	BAO-QUAN T. HO	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 June 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11, 13--19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11 and 13-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 September 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. The amendment filed on 06/10/2008 has been entered and considered by examiner.

Claim Rejections - 35 USC § 112

2. **Claim 5** recites the limitation "wherein the actuation disc (22) ..." in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1, 3, and 6** are rejected under 35 U.S.C. 102(b) as being anticipated by Bihusch, German Patent Application DE 41 10 015 A 1.

Regarding claim 1, A control element for electronic appliances comprising,

a shaped-disc control element (Swingplatte, FIG. 10) tiltable around an axis and perpendicular to a surface of the control element (Tiltable around center axis of Swingplatte), including a sensor (strain gauges, page 1 under “operation characteristics” letter b) having an underside and reacting to pulling and/or compressive stress at the underside, the control element being equipped at the underside with spring elements (Springs shown in FIG. 2) reacting to compressive stress, the spring element is ring-shaped and coaxially arranged at a distance around the axis (Shown in FIG. 2).

Regarding claim 3, Bihusch discloses in Fig. 10 wherein the control element exhibits an outline similar to the area of a circle.

Regarding claim 6, Bihusch discloses in Fig. 10 wherein the control element exhibits a smooth surface.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claims 13, 16, and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bihusch in view of Kehlstadt et al. (hereafter referenced as Kehlstadt), US Patent 6,879,316.

Regarding claim 19, Bihush discloses a method for controlling electronic appliances by manipulating a disc-shaped (Swingplatte, FIG. 10), control element that is tillable around an axis (center of the Swingplatte) perpendicular to a surface, to actuate a sensor, comprising the steps of

providing light pressure onto an edge of the disc-shaped control element causing a tilt,

moving downwardly the control element against a spring force, causing the control element to move slightly perpendicular into the direction of the actuation (two springs shown in Fig. 2),

evaluating the tilt by means of a force or tilt sensor for determining the position of an actuation of the control element (strain gauges, page 1 under "operation characteristics" letter b), whereby a circular movement of the control element provides a different directional tilt, the tilt being recognized as a rotation by a micro processor causes a cursor movement according to the direction of the finger movement on the surface of the control element (The cursor movement is determined by the relationship of the four sensors, Page 1 under "Operation characteristics", so when user applies pressure onto the swingplatte triggering multiple sensors then the computer can recognize a circular motion, for example triggering the right sensor and then triggering the bottom sensor in FIG. 10 will trigger a cursor movement to make a quarter of a circle moving from the right side and a right-downward motion).

Bihusch does not specifically teach a soft spring force of less than 40 grams.

However, Kehlstadt teaches a pointing device which provides a spring force of less than 50 grams of pressure (col. 4 lines 39-43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to have substituted a spring force less than 40 grams of pressure as taught by Kehlstadt in the springs of Bihusch for the purpose of less strain on the finger of the user to provide the variance in pressure needed (col. 4 lines 43-46).

Regarding claim 13, Bihusch discloses wherein a stronger pressure during the actuation along the edge of the control element leads to a faster cursor movement and a weaker pressure along the edge of the control element leads to a slower cursor

movement (the speed of the cursor movement of the strain gauges from the springs, page 1 under "Operation characteristic" letter d).

Regarding claim 16, Bihusch discloses wherein a sliding movement of the finger on the surface of the control element is detected solely from the direction of the tilt of an axis by means of force sensors (four strain gauges are positioned to determine the coordinate position when the swingplatte is tilted by applied hand pressure, English abstract and page 1 under “Operation characteristics” letter c).

7. **Claims 2, 4-5, and 7-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bihusch in view of Goldenberg et al. (hereafter referenced as Goldenberg), US Patent 6,636,197.

Regarding claim 2, Bihusch discloses a control element according to claim 1, but does not specially teach wherein the control element arranged axially manoeuvrable within the appliance casing.

However, Goldenberg teaches in Fig. 1 a control element arranged axially maneuverable within the appliance casing (the apparatus mounted within panel 12, col. 3 lines 66-67 to col. 4 lines 1-20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to have added a casing as taught by Goldenberg around the control element of Bihusch for the purpose of controlling various functions of a device (col. 4 lines 1-3) and for protection to the components of the control element.

Regarding claim 4, Bihusch does not specially teach wherein the control element is equipped with and attached to a rotatable actuation disc.

However, Goldenberg teaches in Fig. 2 a control element is equipped with and attached to a rotatable actuation disc (control knob 26).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to have attached a rotatable control knob as taught by Goldenberg onto the control element of Bihusch for the purpose of more functionalities to the control device (col. 6 lines 16-31).

Regarding claim 5, Goldenberg disclose wherein the actuation disc (26) is rotatable around an axis (axis A) of the control element and is pivoted and supported over transmission elements (knob pulley 82) on the surface of the control element (col. 7 lines 51-62).

Regarding claim 7, Goldenberg discloses wherein the actuation disc (26) exhibits a structured surface (col. 5 lines 12-15).

Regarding claim 8, Goldenberg discloses wherein the actuation disc (26) exhibits a geometric form tuned to the control element (col. 5 lines 9-18)

Regarding claim 9, Goldenberg discloses in Fig. 2 wherein the actuation disc (26) is shaped like a cap that is mounted easily rotatable on the control element.

8. **Claims 14-15, and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bihusch in view of Kehlstadt as applied to claims 19 and 13 above, and further in view of Goldenberg.

Regarding claim 14, Bihusch in view of Kehlstadt discloses the method according to claim 19, but does not specifically teaches wherein a menu is selected by actuating the edge of the upper side of the control element, the position of the actuation on the control element leading to a highlighting of a menu item at the corresponding position on a display.

However, Goldenberg discloses wherein a menu is selected (col. 6 lines 1-7) by actuating the edge of the upper side of the control element, the position of the actuation on the control element leading to a highlighting of a menu item at the corresponding position on a display (Fig. 1 and Fig. 4E, col. 5 lines 47-56).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to have added the functionalities to select a menu as taught by Goldenberg to the control element of Bihusch for the purpose of more functionalities to the control device (col. 6 lines 16-31).

Regarding claim 15, Goldenberg discloses wherein a character repertoire (Fig. 1, col. 6 lines 1-7) is displayed upon actuation of the outer edge of the upper side of the control element, the position of the actuation on the surface of the control element leading to a highlighting of a character at the corresponding position on a display (col. 5 lines 47-56) and the most recently highlighted character is input when the control element is released (col. 6 lines 36-48).

Regarding claim 17, Goldenberg discloses wherein the highlighting of a character can be selected by changing positions during the actuated state of the control element (col. 6 lines 36-48).

9. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over Bihusch in view of Kehlstadt as applied to claims 19 and 13 above, and further in view of Goren, US Patent 7,190,351.

Regarding claim 18, Bihusch in view of Kehlstadt discloses the method according to claim 13, but does not specially teach wherein the character repertoire consists of the letters "A" to "M" at the upper edge of the screen and the letters "N" to "Z" at the lower edge of the screen.

However, Gorgen teaches a character repertoire consists of the letters "A" to "M" at the upper edge of the screen and the letters "N" to "Z" at the lower edge of the screen (Fig. 19 and 20 shows an illustration of the character selection interface with control buttons 200-204 and secondary buttons 300-305 displayed on the screen 110. The control buttons 200-204 may be placed on the left hand side while the secondary buttons 300-305 may be placed on the right hand side for the convenience of a handheld with a jog wheel, col. 17 lines 6-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to have manipulated the character selection interface as taught by Gorgen to arrange the letters "A" to "M" at the upper edge of the screen and the letters "N" to "Z" at the lower edge of the screen to be in conjunction with the control element of Bihusch as modified by Bihusch for the purpose of rapid selection and with ease (col. 17 lines 6-17).

10. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Bihusch in view of Nuovo et al. (hereafter referenced as Nuovo), US Design D490,405 S.

Regarding claim 10, Bihusch discloses the Control element according to claim 1, but does not specially teach wherein the control element exhibits tick marks consisting of twelve marks in regular intervals.

However, Nuovo teaches in Fig. 1 a control element exhibits tick marks consisting of twelve marks in regular intervals.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to have added twelve tick marks in regular intervals as taught by Nuovo to the control element of Bihusch for the purpose of haptic feedback for the user.

11. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over Bihusch in view of Lee et al. (hereafter referenced as Lee), US Patent 6,804,027.

Regarding claim 11, Bihusch discloses the control element according to claim 1, but does not specially teaches wherein the appliance casing exhibits tick marks next to the edge of the control element consisting of twelve marks in regular intervals where the actuation disc is arranged on the control element.

However, Lee teaches an appliance casing exhibits tick marks next to the edge of the control element consisting of eight marks in regular intervals where the actuation disc is arranged on the control element (Fig. 7, a control knob 701 with tick marks arrange on the housing around the outside of the control knob). It would have been

obvious to have twelve tick marks in regular intervals depending on the user's or manufacture's preference.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to have combined the housing with tick marks as taught by Lee with the control element of Bihusch for the purpose of accurate adjustments (col. 4 lines 33-40).

Response to Arguments

12. Applicant's arguments filed 06/10/2008 have been fully considered but they are not persuasive.

Applicant argues on page 9, under the claim rejection of 102, "Unlike the actual application, the teaching of his reference does not allow for selecting a function or even for data input and is not suitable for any direct selection". Examiner disagrees, the device of Bihusch is used to move a cursor control for selecting a function, wherein the function to move the cursor in any directions. Also Applicant argues "the control element describe in this reference can not be rotated mechanically...". however the actual application the control element is also NOT mechanically rotatable, stated on page 7 in the first paragraph of lines 5-7, "The control element 11 is tiltable against a vertical axis 14 and is positioned movable within an appliance casing 15, but **not** rotatable." (Emphasis added)

On page 10 of first paragraph, Applicant argues "the sensor keys described in Kelstadt are not mechanically rotatable". Examiner relied on Kelstadt in the teaching of applying force spring of less than 40 grams. In addition the actual application the

control element is also NOT mechanically rotatable, stated on page 7 in the first paragraph of lines 5-7, "The control element 11 is tiltable against a vertical axis 14 and is positioned movable within an appliance casing 15, but **not** rotatable." (Emphasis added)

On page 10 of second paragraph, Applicant argues "the knob taught by Goldenberg is not tiltable". The combination of Bihusch and Goldenberg teaches the control element and knob is tiltable.

On page 10 of third paragraph, Applicant argues the rejection of claims 1, 3 and 6 made by reference Bihusch in combination with Goldenberg; however claims 1, 3 and 6 are rejected by the single reference of Bihusch.

On page 11 of first paragraph continued from previous page 10, Applicant argues the inaccuracy of measuring "circular movements of the user's finger on the disc only in a resolution of four steps". Applicant arguments are moot. The actual application is not claimed, nevertheless the prior art reads on the recited claimed limitations.

On page 11 of second paragraph, Applicant argues “Goldberg does not allow for selecting and activating functions". Examiner disagrees; Goldenberg discloses a device allowing the user to select functions, Col. 6 lines 32-55.

On page 11 of third and forth paragraph, the actual application and the claimed application are not the same. The prior art reads on the recited claimed limitations as rejected above in the rejection section.

On page 11 of fifth and continuing on first paragraph of page 12, Applicant states “Bihusch would therefore allow for measuring relative modifications of the position and

hence for circular movements of the user's finger on the disc only in a resolution of four steps", nonetheless Bihusch is still possible to measure circular movements but only in a resolution of four steps. The prior art reads on the recited claimed limitations as rejected above in the rejection section.

On page 12, Applicant arguments are moot. The actual application is not claimed, whereas the prior arts reads on the recited claimed limitations as rejected above in the rejection section.

On page 13, concerning claim 2, see the first argument in referenced above.

On page 13-14, concerning claims 4-5, 7 and 8, Applicant arguments are moot. The actual application is not claimed, whereas the prior arts reads on the recited claimed limitations as rejected above in the rejection section.

On page 14, concerning claim 9, the combination of Bihusch and Goldenberg makes the device having a tiltable control element and a knob that is rotatable; therefore the prior art reads on the recited claimed limitations as rejected above in the rejection section.

On pages 15-16, concerning claims 14-15, 17, and 18, Applicant arguments are moot. The actual application is not claimed, whereas the prior arts reads on the recited claimed limitations as rejected above in the rejection section.

On page 17, concerning claims 10 and 11, Applicant arguments are moot. The actual application is not claimed, whereas the prior arts reads on the recited claimed limitations as rejected above in the rejection section.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BAO-QUAN T. HO whose telephone number is (571)270-3264. The examiner can normally be reached on M-F, 8:30 am to 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh D. Nguyen can be reached on (571) 272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BTH

/Chanh Nguyen/
Supervisory Patent Examiner, Art Unit 2629